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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,488	02/21/2002	Nobuyuki Nemoto	826.1791	4891
21171	7590	12/12/2007		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER BELLO, AGUSTIN	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/078,488

Applicant(s)

NEMOTO ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/07 has been entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-5 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In each of the claims listed above, applicant recites: "wherein when an optical signal component of a wavelength of the WDM optical signal is disconnected ***based on a detected disconnect fault***, the feed-back circuit sets the attenuation amount of a variable attenuator assigned to the optical signal component to a predetermined fixed value." However, the claim language is unclear in that it appears to recite that the WDM optical signal is disconnected as a result of a detected disconnect fault. In other words, it appears applicant is claiming that a disconnect fault is first detected, and then a WDM signal is disconnected. This recitation is inconsistent with the specification and drawings.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 and 8-12, *as best understood in view of the 35 USC §112 rejection above*, are rejected under 35 U.S.C. 103(a) as being obvious over Ford (U.S. Patent No. 6,392,769) in view of Beine (U.S. Patent No. 6,304,347).

Regarding claims 3, 8, and 11, Ford teaches a plurality of variable attenuators (reference numeral 402 in Figure 4) for adjusting optical power levels of optical signal components of individual wavelengths demultiplexed from the WDM optical signal; a plurality of output optical level detecting units (reference numeral 405 in Figure 4) detecting the output optical levels of the plurality of variable attenuators; and a feed-back circuit (reference numeral 409 in Figure 4) for controlling adjustments of the optical attenuation amounts of the plurality of variable attenuators, wherein optical signal components of individual wavelengths whose power levels have been adjusted by the plurality of variable attenuators are multiplexed (e.g. via reference numeral 404 in Figure 4) and thereby a WDM optical signal is generated and transmitted. Ford further teaches that a target value is sent to the feed-back circuit (reference numeral 409 in Figure 4) the target value representing the optical power level of each of the optical signal components of individual wavelengths (e.g. the power level measurement performed by the detectors reference numeral 405 in Figure 4). Ford differs from the claimed invention in that Ford fails to specifically teach that the disconnection detector is a fault detector detecting a

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disconnection fault. However, Ford suggests as much by disclosing that when an optical signal component of a wavelength of the WDM optical signal is disconnected (e.g. dropped according to the “add/drop reconfiguration” described in column 4 lines 20-31), the feed-back circuit sets the attenuation amount of a variable attenuator assigned to the optical signal component to a predetermined fixed value (column 2 lines 29-35; reference numeral 704, 707, 711 in Figure 7). Furthermore, Beine teaches a fault detector detecting a disconnection fault (column 7 line 60 – column 8 line 2), whereby an optical attenuator is set to a particular level based on the detected disconnect fault. One skilled in the art would have been motivated to include a fault detector detecting a disconnection fault in the system of Ford in order to allow the system to compensate for power changes larger than the relative power of a single wavelength (column 7 lines 64-67 of Beine). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a fault detector detecting a disconnection fault in the system of Ford as taught by Beine.

Regarding claims 4 and 9, Ford teaches the limitations of claims 3 and 8 which have been incorporated into claims 4 and 9, and further teaches setting a variable attenuator to a predetermined value when the signal is dropped. Ford but differs from the claimed invention in two manners.

First, Ford fails to specifically teach that the predetermined value is set so that upon addition of a new signal to the system, the abrupt input does not destroy a WDM transmitting apparatus downstream from the variable attenuator. However, one skilled in the art would clearly have recognized that in adding new signals and dropping old signals, adjustments to the newly added signals would be necessary to carefully optimize the system (column 4 lines 20-31

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of Ford). Furthermore, Beine discloses setting a variable attenuator to a predetermined value so that upon addition of a new signal to the system, the abrupt input does not destroy a WDM transmitting apparatus downstream from the variable attenuator (column 24 lines 9-22). One skilled in the art would have been motivated to set a variable attenuator to a predetermined low value as disclosed by Beine in order to ensure that the signal input to the downstream element has a selected power level to meet the power input requirements of the downstream network element (column 24 lines 20-22 of Beine). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to set a variable attenuator to a predetermined value in the device of Ford as disclosed by Beine.

Second, Ford differs from the claimed invention in that Ford fails to specifically teach that the disconnection detector is a fault detector detecting a disconnection fault. However, Ford suggests as much by disclosing that when an optical signal component of a wavelength of the WDM optical signal is disconnected (e.g. dropped according to the “add/drop reconfiguration” described in column 4 lines 20-31), the feed-back circuit sets the attenuation amount of a variable attenuator assigned to the optical signal component to a predetermined fixed value (column 2 lines 29-35; reference numeral 704, 707, 711 in Figure 7). Furthermore, Beine teaches a fault detector detecting a disconnection fault (column 7 line 60 – column 8 line 2), whereby an optical attenuator is set to a particular level based on the detected disconnect fault. One skilled in the art would have been motivated to include a fault detector detecting a disconnection fault in the system of Ford in order to allow the system to compensate for power changes larger than the relative power of a single wavelength (column 7 lines 64-67 of Beine). Therefore, it would have been obvious to one skilled in the art at the time the invention was

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made to include a fault detector detecting a disconnection fault in the system of Ford as taught by Beine.

Regarding claims 5 and 10, Ford teaches the limitations of claims 3 and 8 which have been incorporated into claims 5 and 10. Ford differs from the claimed invention, but at minimum suggests a feed-back circuit that maximizes the attenuation amount of a variable attenuator assigned to an optical signal component of an unused wavelength. More concretely, Ford's feed-back circuit is clearly capable of the making any adjustment necessary to the variable attenuator assigned to an optical signal component. As such, it stands to argue that the feed-back circuit is capable of maximizing the attenuation amount of a variable attenuator assigned to an optical signal component of an unused wavelength. Furthermore, Beine explicitly discloses such a feature (column 22 lines 50-52). One skilled in the art would have been motivated to maximize the attenuation amount of a variable attenuator assigned to an optical signal component of an unused wavelength in order to ensure that the signal input to the downstream element is within that element's dynamic range (column 24 lines 20-22 of Beine), or to support squelching requirements during network switching (column 22 lines 50-52 of Beine). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to apply the feedback circuit of Ford in the manner disclosed by Beine in order to maximize the attenuation amount of a variable attenuator assigned to an optical signal component of an unused wavelength.

Ford further differs from the claimed invention in that Ford fails to specifically teach that the disconnection detector is a fault detector detecting a disconnection fault. However, Ford suggests as much by disclosing that when an optical signal component of a wavelength of the

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WDM optical signal is disconnected (e.g. dropped according to the “add/drop reconfiguration” described in column 4 lines 20-31), the feed-back circuit sets the attenuation amount of a variable attenuator assigned to the optical signal component to a predetermined fixed value (column 2 lines 29-35; reference numeral 704, 707, 711 in Figure 7). Furthermore, Beine teaches a fault detector detecting a disconnection fault (column 7 line 60 – column 8 line 2), whereby an optical attenuator is set to a particular level based on the detected disconnect fault. One skilled in the art would have been motivated to include a fault detector detecting a disconnection fault in the system of Ford in order to allow the system to compensate for power changes larger than the relative power of a single wavelength (column 7 lines 64-67 of Beine). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a fault detector detecting a disconnection fault in the system of Ford as taught by Beine.

Regarding claim 12, the combination of references teaches the limitations in common between this claim and the previously rejected claims noted above. Furthermore, Ford teaches using a threshold for determining a disconnection (column 6 line 60 – column 7 line 9).



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***Response to Arguments***

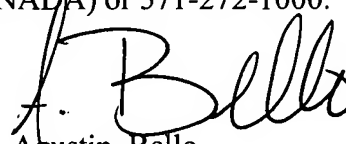
6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Agustin Bello  
Primary Examiner  
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